

Fig. 1
(PRIOR ART)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

The diagram illustrates a 2D array structure. The top row is divided into two columns: 'VL NUMBER (0-14)' and 'WEIGHT VALUE (0-255)'. The array is organized into four quadrants, each containing a vertical double-headed arrow. The top-left quadrant is labeled 'HIGH PRIORITY 12' and has a vertical range from 0 to 63. The top-right quadrant is labeled '15' and '16'. The bottom-left quadrant is labeled 'LOW PRIORITY 13' and has a vertical range from 0 to 63. The bottom-right quadrant is labeled 'LIMIT OF HIGH PRIORITY 14' and has a vertical range from 0 to 63. The array is divided into four quadrants by a horizontal line and a vertical line. The top-left quadrant is labeled 'HIGH PRIORITY 12' and has a vertical range from 0 to 63. The top-right quadrant is labeled '15' and '16'. The bottom-left quadrant is labeled 'LOW PRIORITY 13' and has a vertical range from 0 to 63. The bottom-right quadrant is labeled 'LIMIT OF HIGH PRIORITY 14' and has a vertical range from 0 to 63. The array is divided into four quadrants by a horizontal line and a vertical line. The top-left quadrant is labeled 'HIGH PRIORITY 12' and has a vertical range from 0 to 63. The top-right quadrant is labeled '15' and '16'. The bottom-left quadrant is labeled 'LOW PRIORITY 13' and has a vertical range from 0 to 63. The bottom-right quadrant is labeled 'LIMIT OF HIGH PRIORITY 14' and has a vertical range from 0 to 63.

Fig. 2A
(PRIOR ART)

ARBITRATION TABLE

Index	VL	Weight Value
0	0	1
1	1	1
2	0	1
3	2	0
4	0	1
5	3	1
6	0	1
7	2	1
8	1	1
9	4	1
10	0	0
11	F	1
12	F	1
13	F	1
14	F	1
15	F	0

INDEX
POINTER

REQUEST
PENDING

Fig. 2B
(PRIOR ART)

20

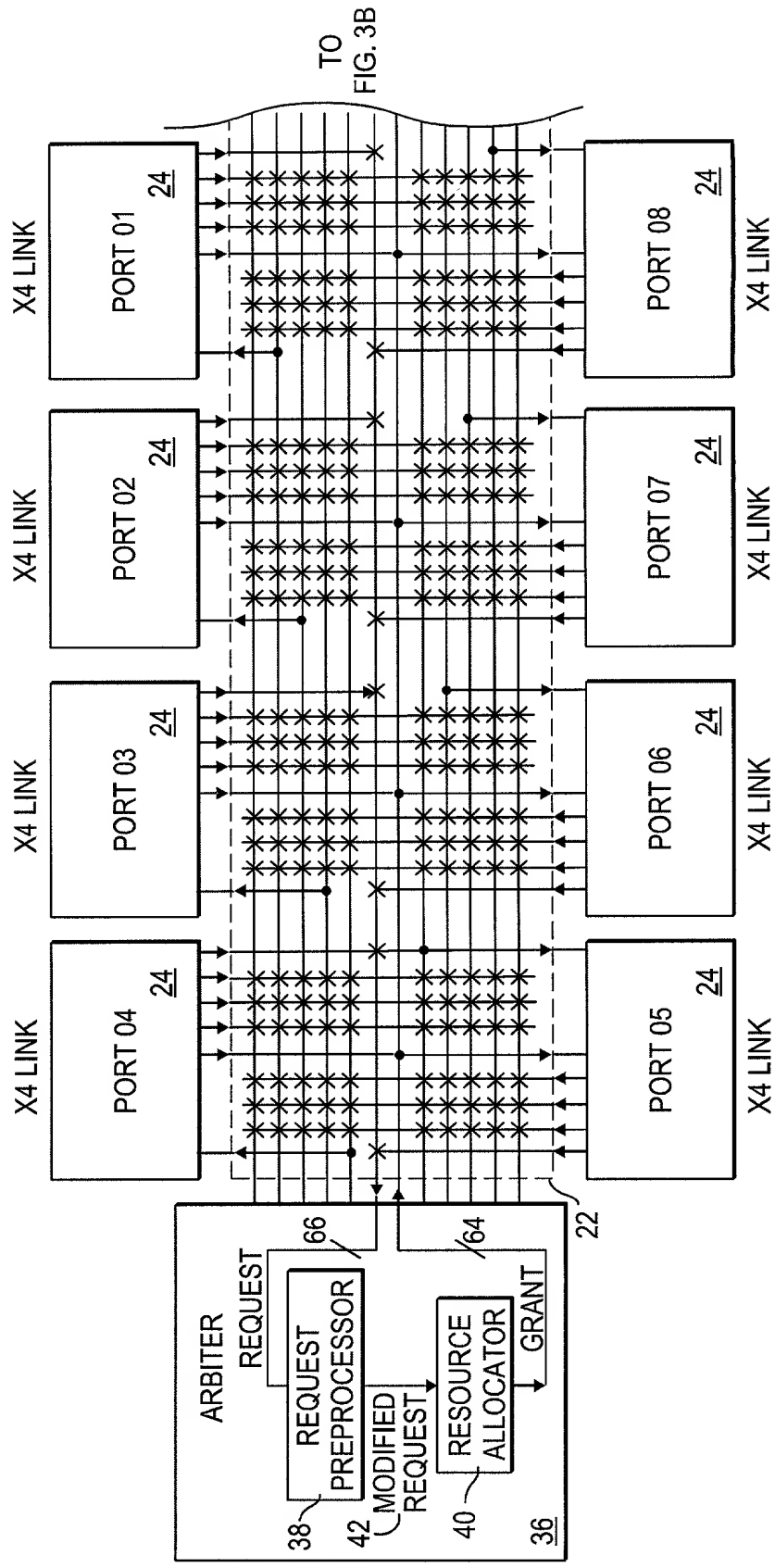
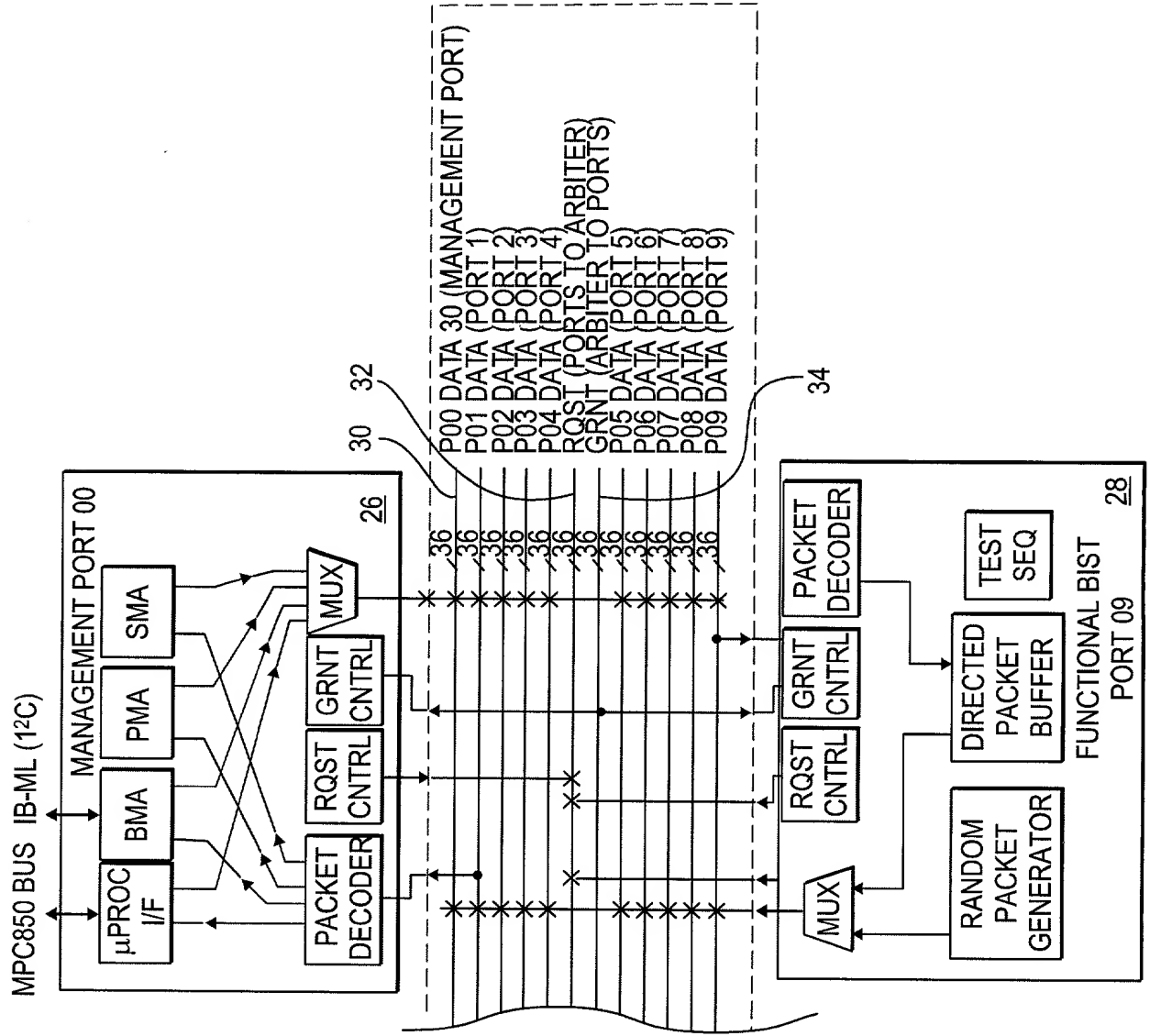


Fig. 3A



FROM
FIG. 3A

Fig. 3B

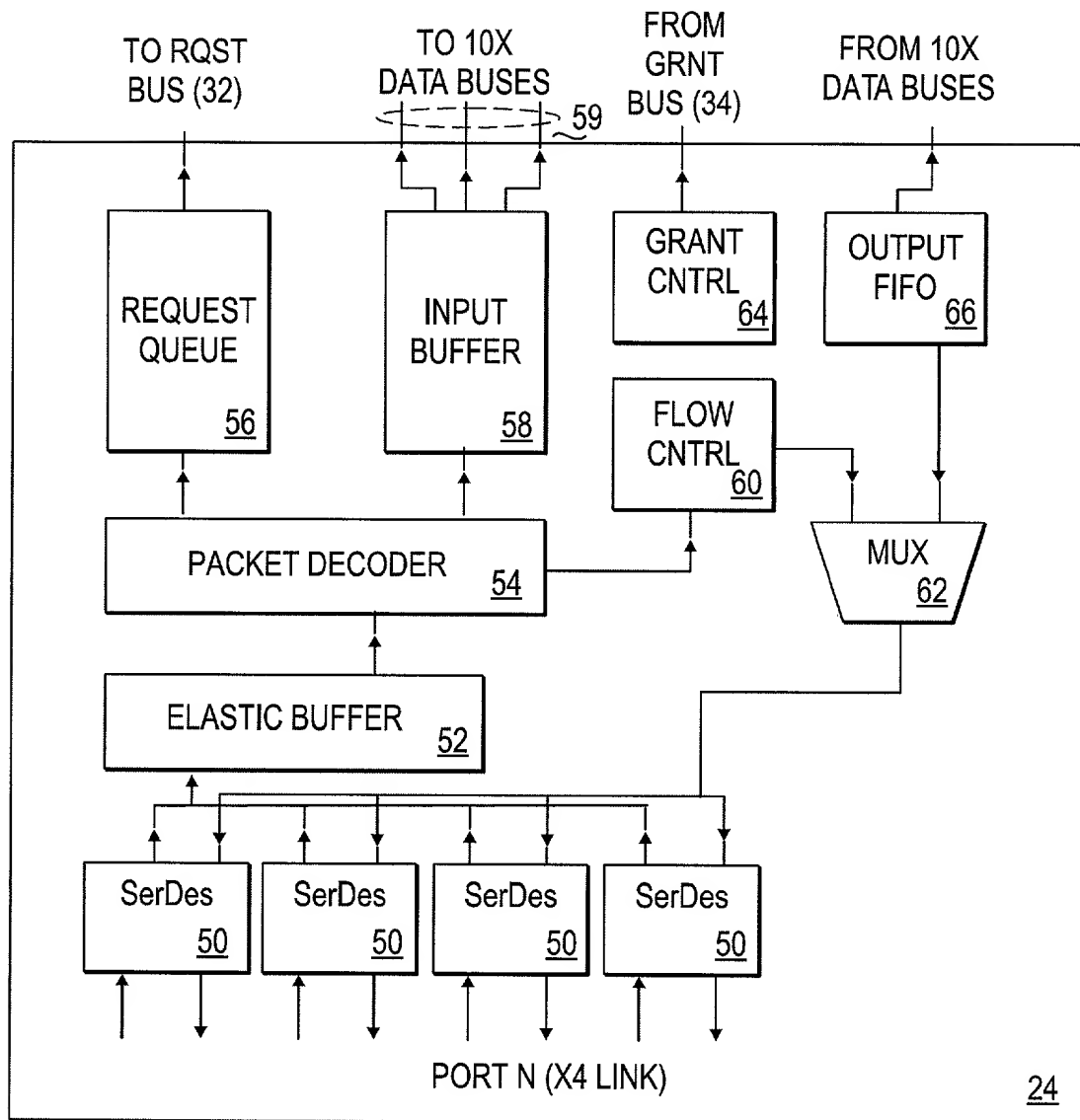


Fig. 4

DESTINATION
ROUTING
REQUEST

70

REQUEST EXTENSION (2 BIT) <u>96</u>	PARTITION KEY (16 BIT) <u>92</u>	DESTINATION ADDRESS (16 BIT) <u>90</u>	SERVICE LEVEL (4 BIT) <u>94</u>	PACKET LENGTH (11 BIT) <u>86</u>	REQUEST ID (10 BIT) <u>84</u>	INPUT PORT (5 BIT) <u>82</u>	REQUEST CODE (2 BIT) <u>80</u>
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DIRECT
ROUTING
REQUEST

72

REQUEST EXTENSION (2 BIT) <u>76</u>	RESERVED (27 BIT)	OUTPUT PORT (5 BIT) <u>88</u>	VIRTUAL LANE (4 BIT) <u>102</u>	PACKET LENGTH (11 BIT) <u>86</u>	REQUEST ID (10 BIT) <u>84</u>	INPUT PORT (5 BIT) <u>82</u>	REQUEST CODE (2 BIT) <u>80</u>
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CREDIT
UPDATE
REQUEST

74

PORT STATUS (2BIT) <u>98</u>	RESERVED (27 BIT)	OUTPUT PORT (5 BIT) <u>88</u>	VIRTUAL LANE (4 BIT) <u>102</u>	FLOW CONTROL CREDIT LIMIT (FCCL) (12 BIT) <u>104</u>	RESERVED (9 BIT)	INPUT PORT (5 BIT) <u>82</u>	REQUEST CODE (2 BIT) <u>80</u>
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Fig. 5

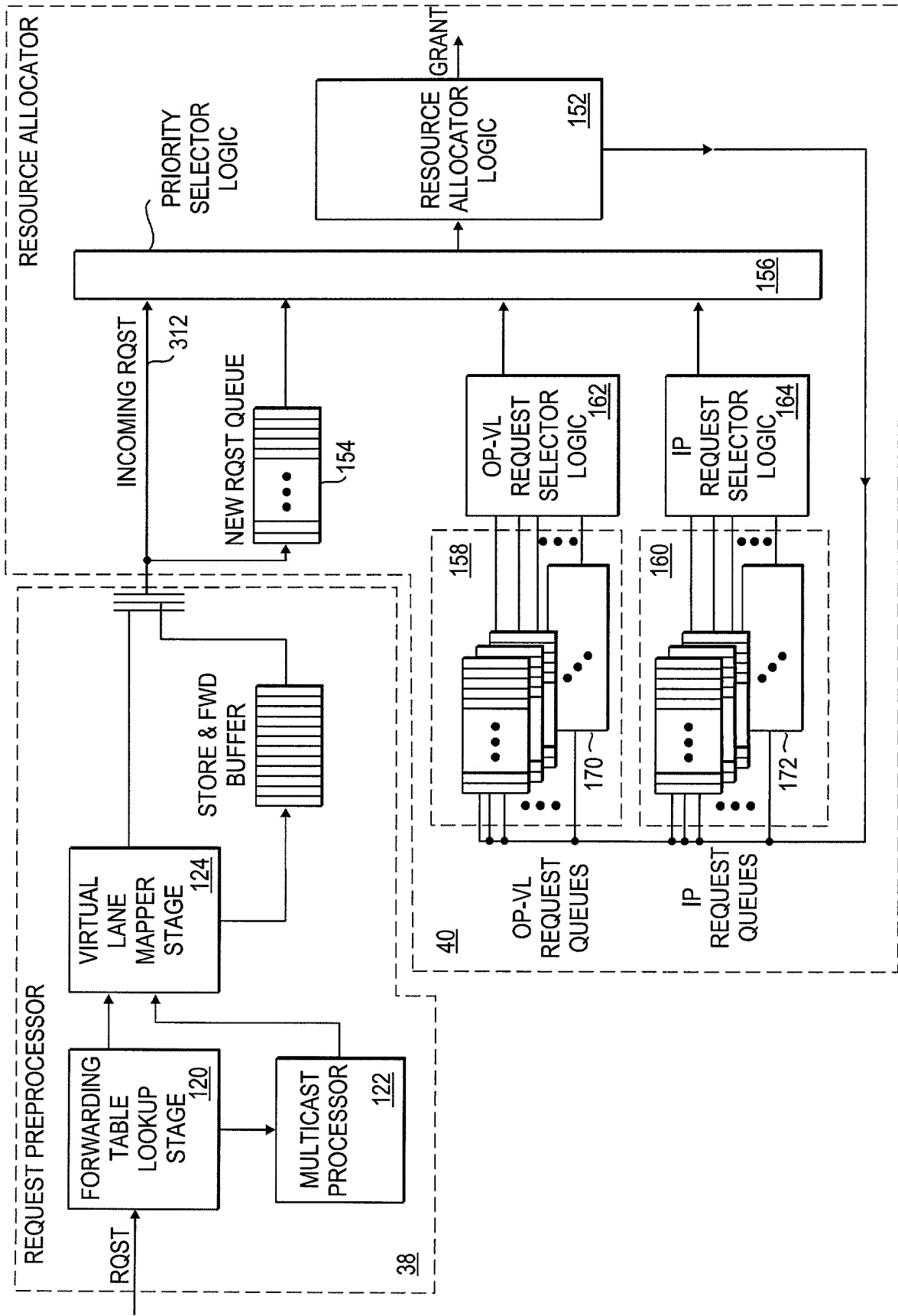


Fig. 6

42

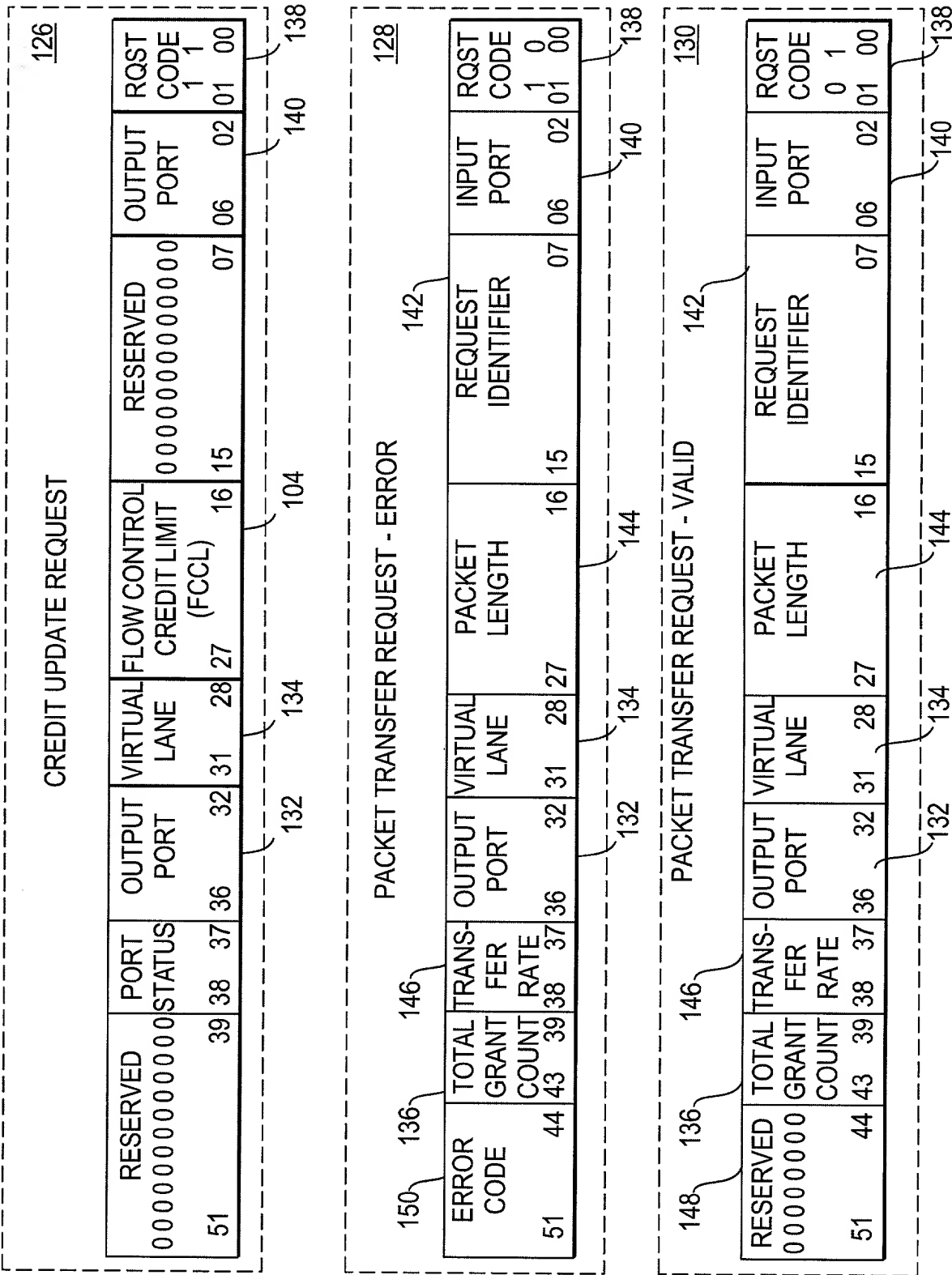


Fig. 7

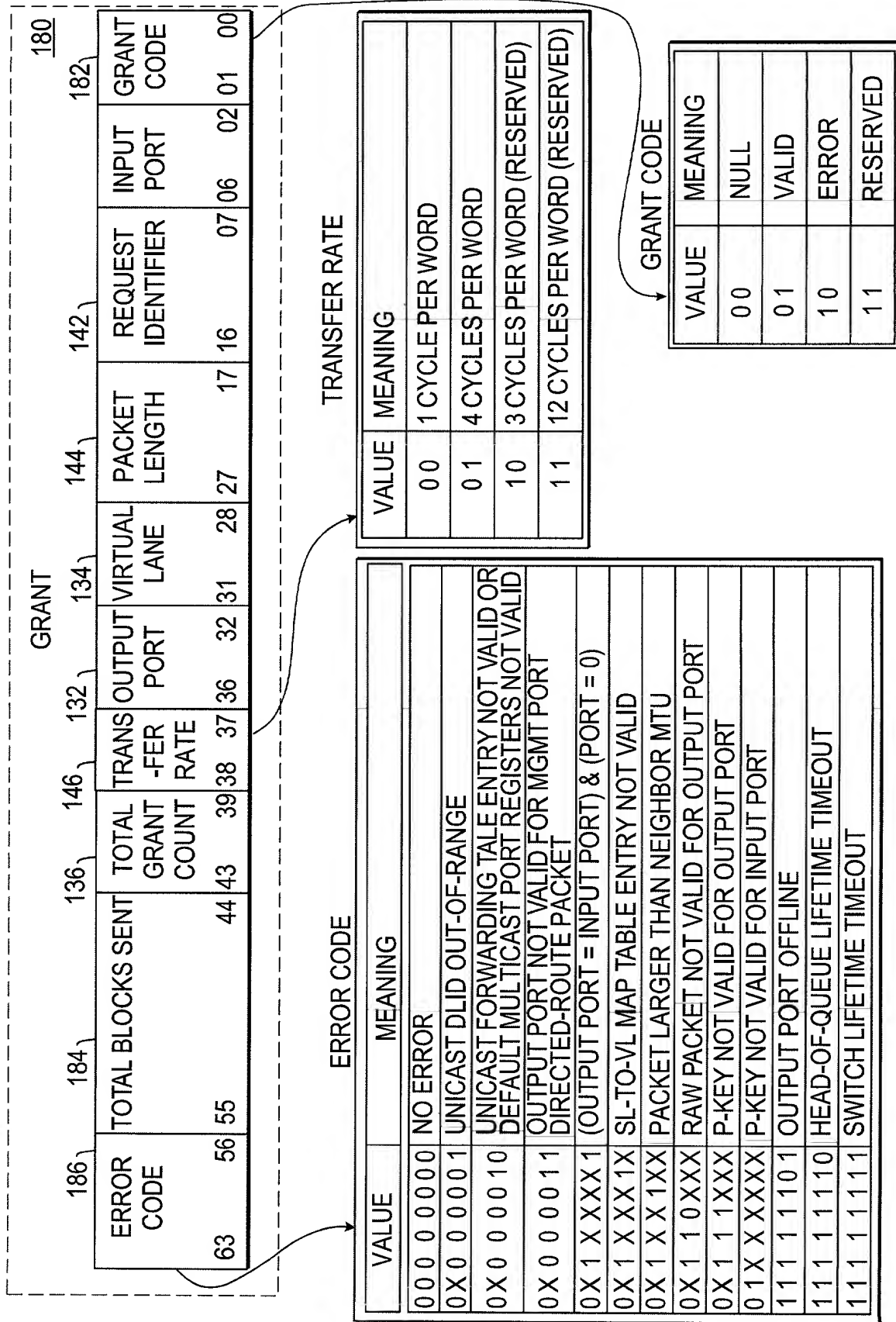


Fig. 8

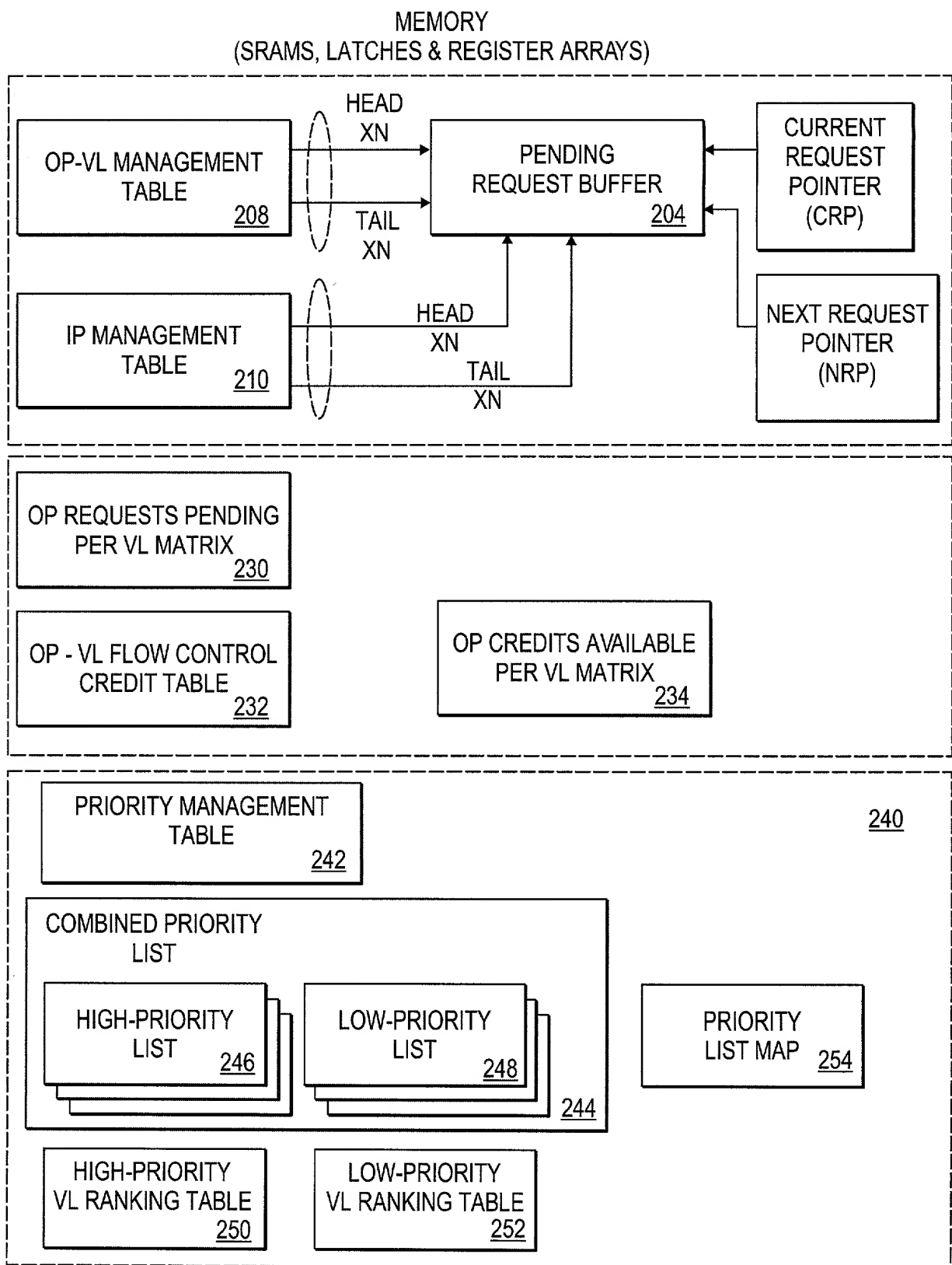


Fig. 9

Combined Priority List Address Map

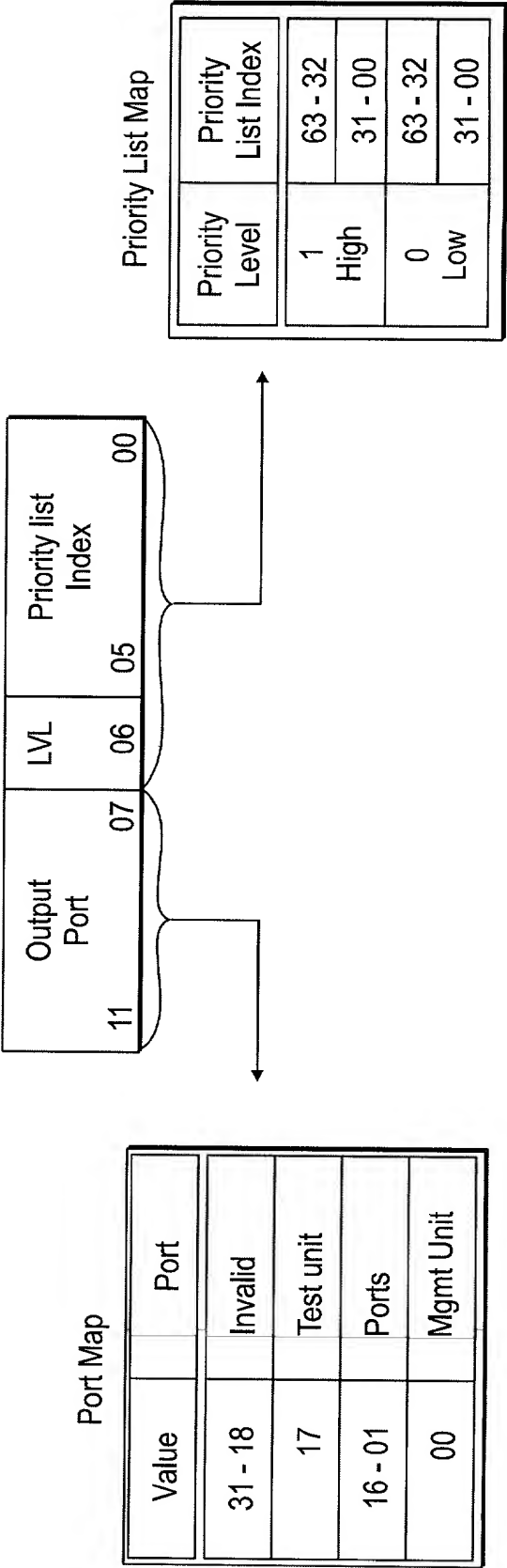


Fig. 10A

High-Priority VL Ranking Table - Address Map

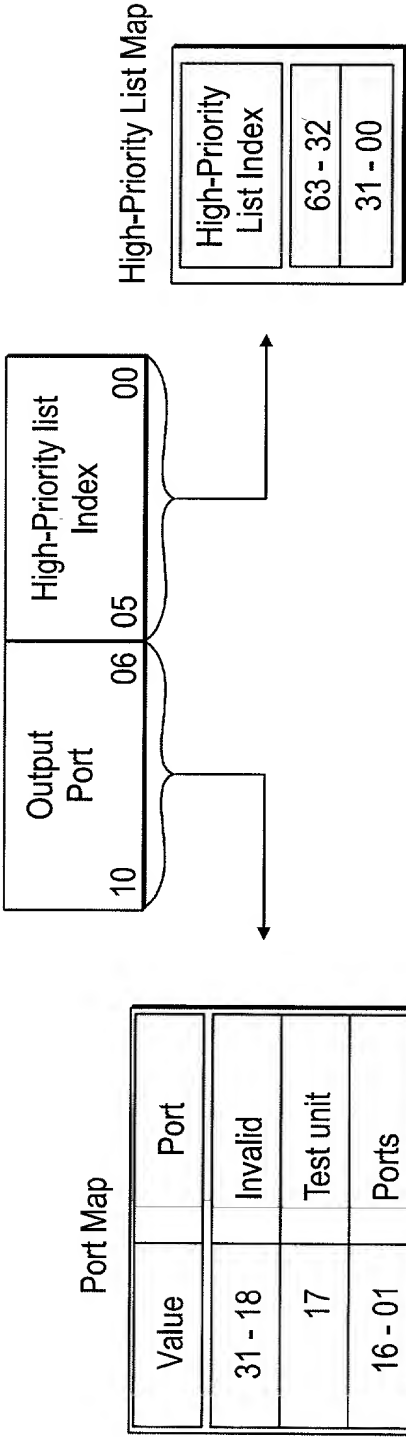


Fig. 10B

Low-Priority VL Ranking Table - Address Map

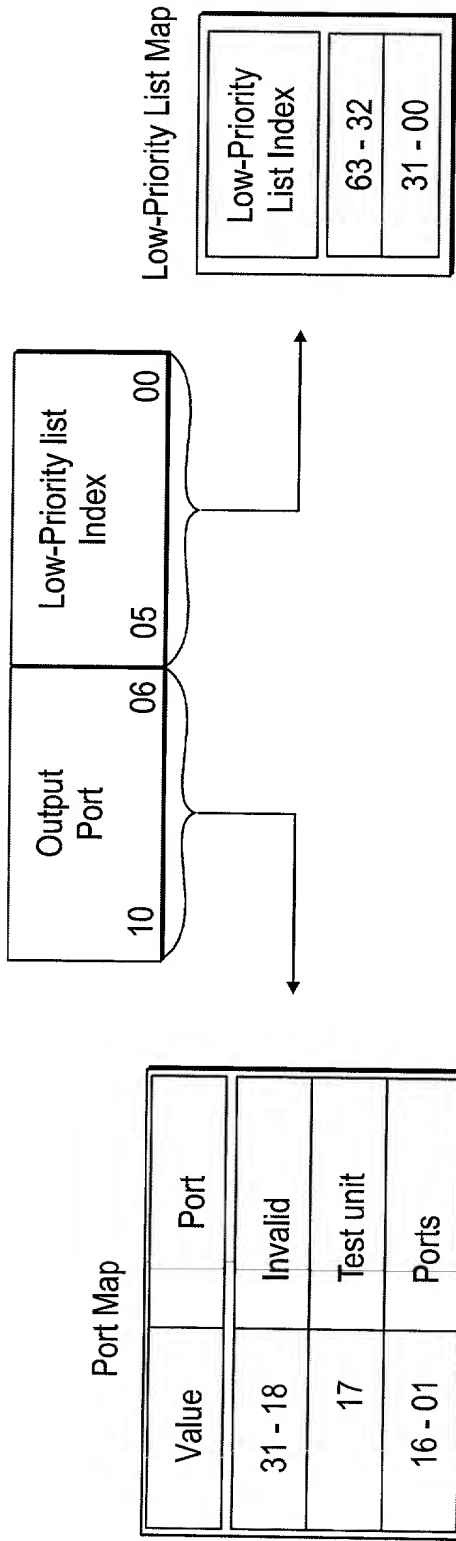


Fig. 10C

Priority List Address Map

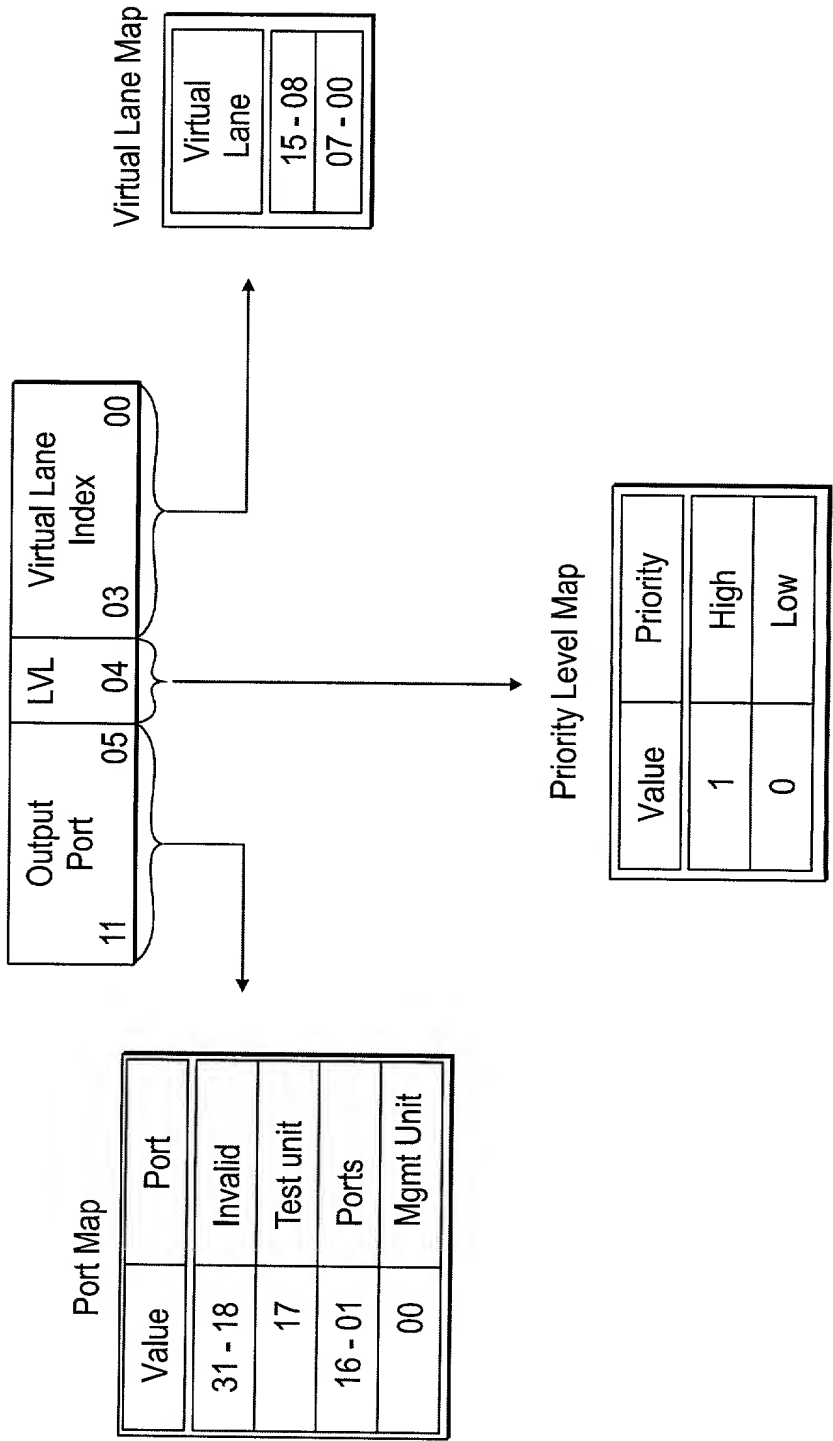


Fig. 10D

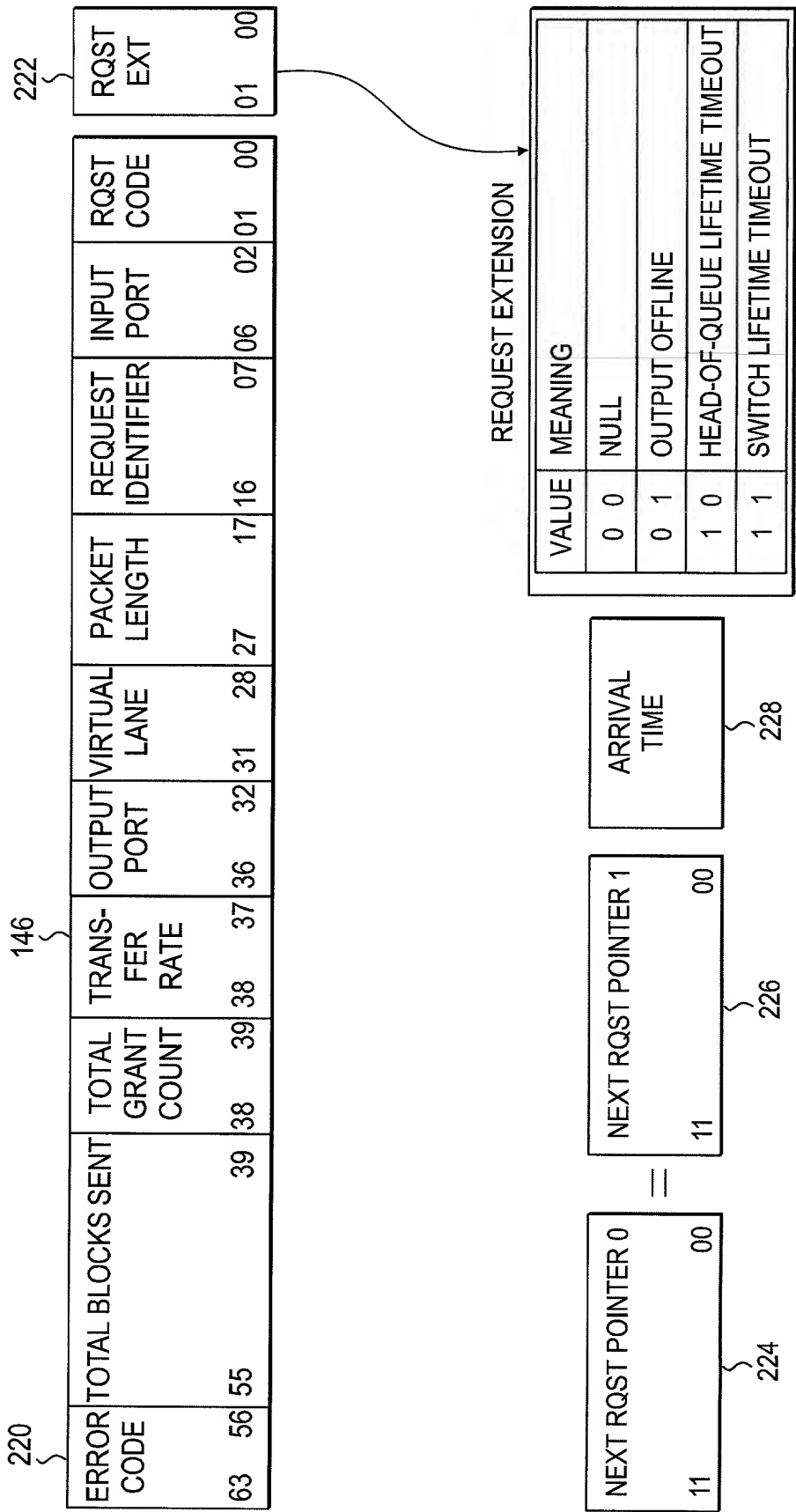


Fig. 11

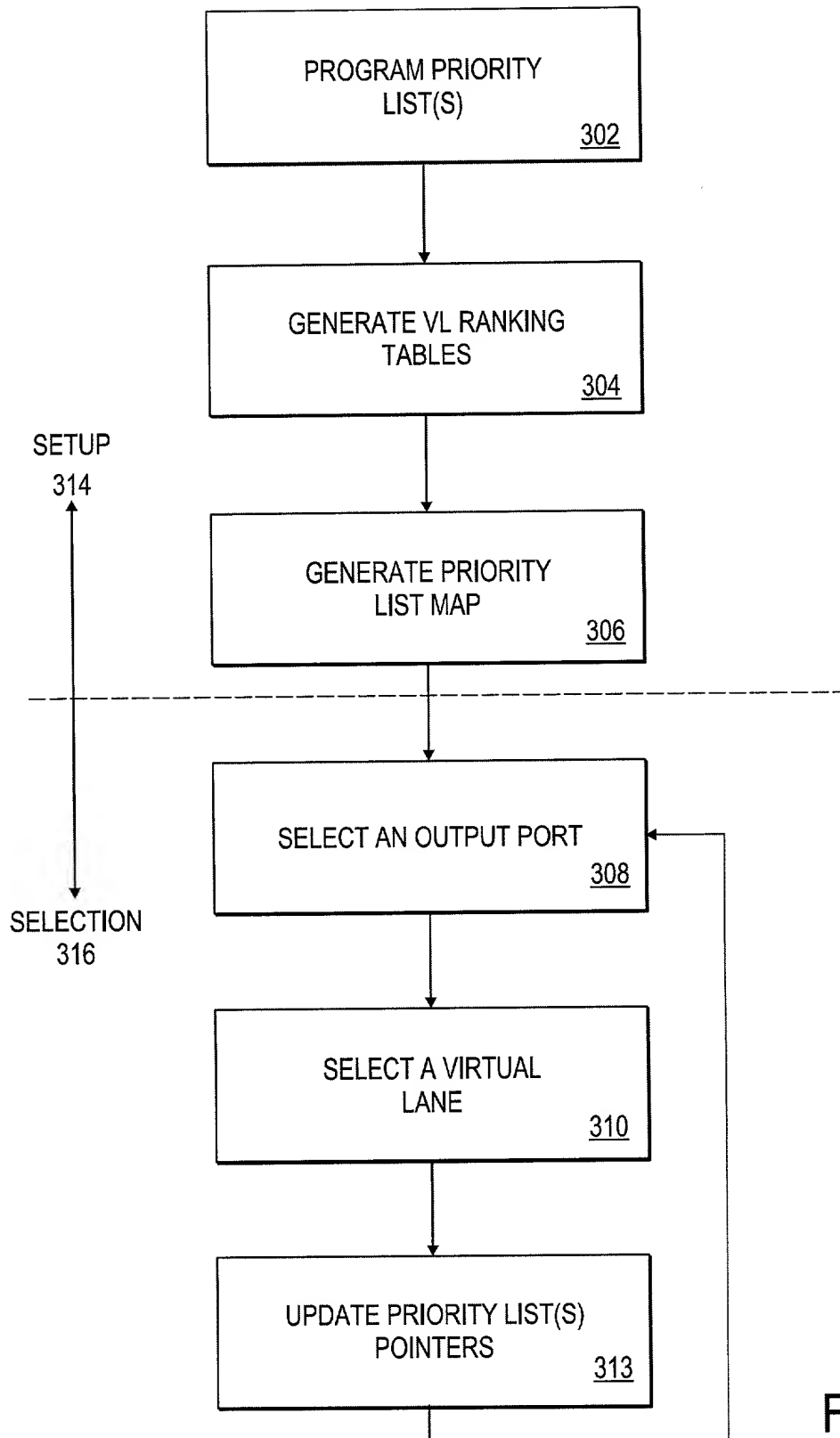


Fig. 12

FIG. 13

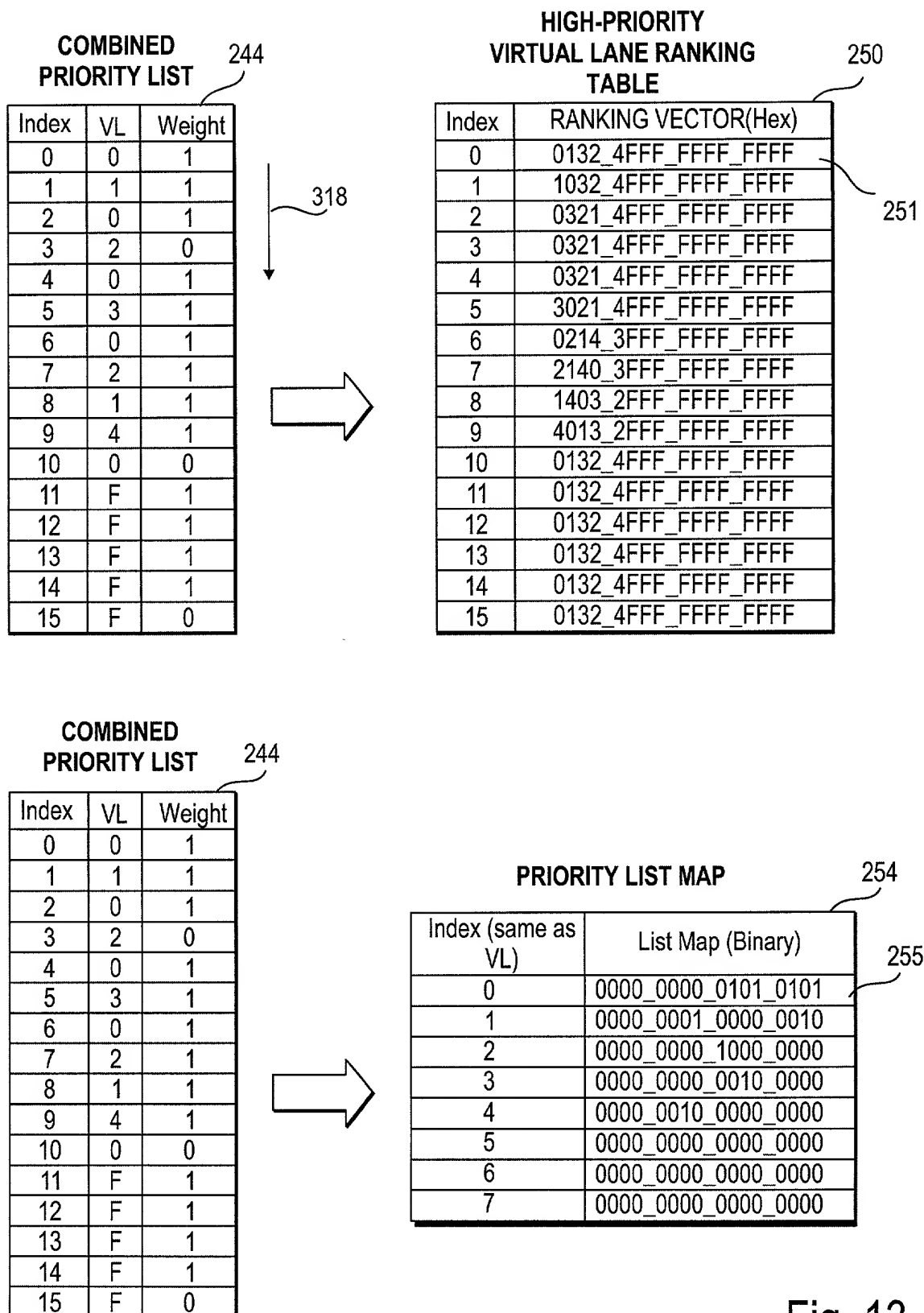


Fig. 13

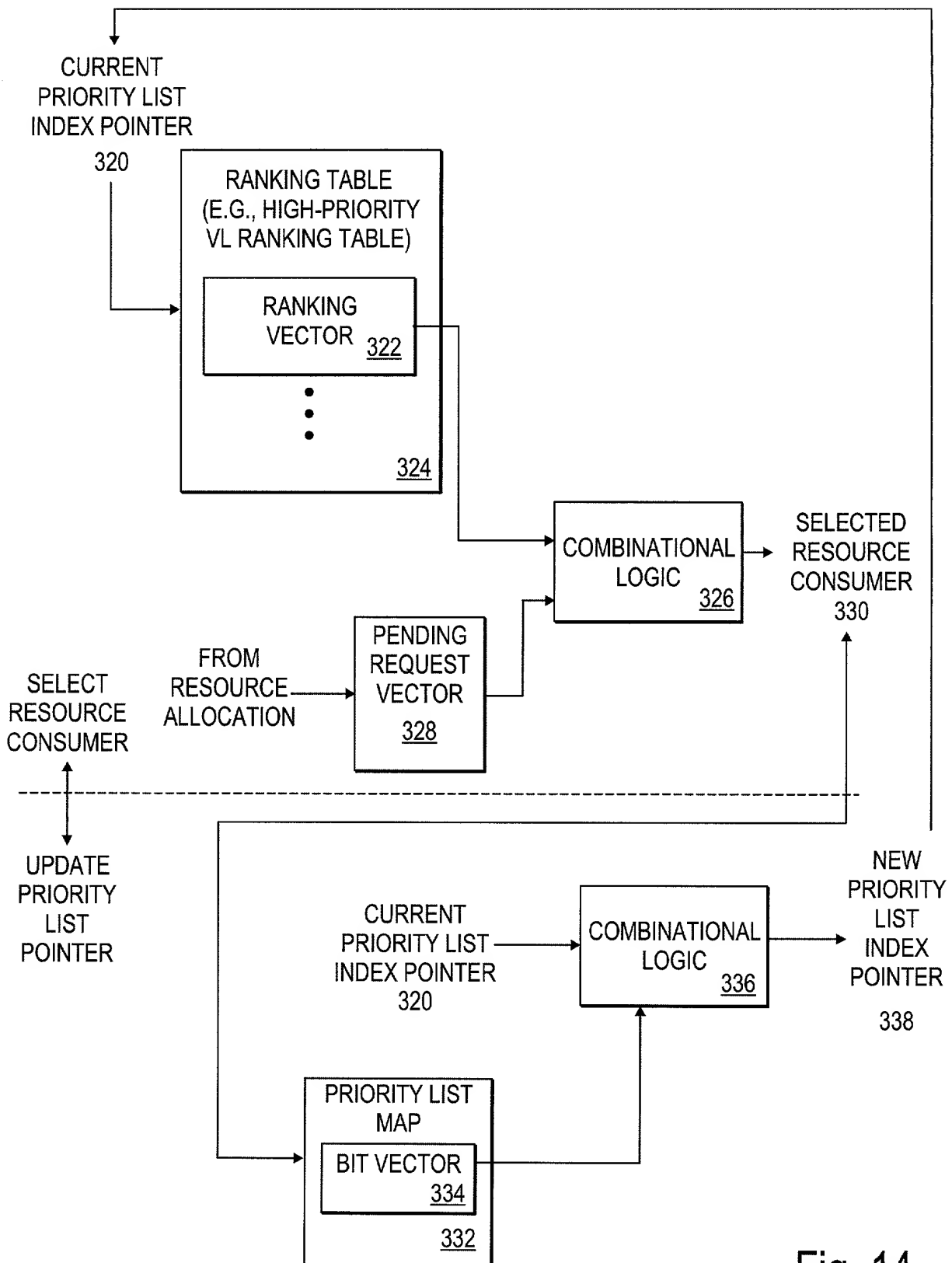


Fig. 14

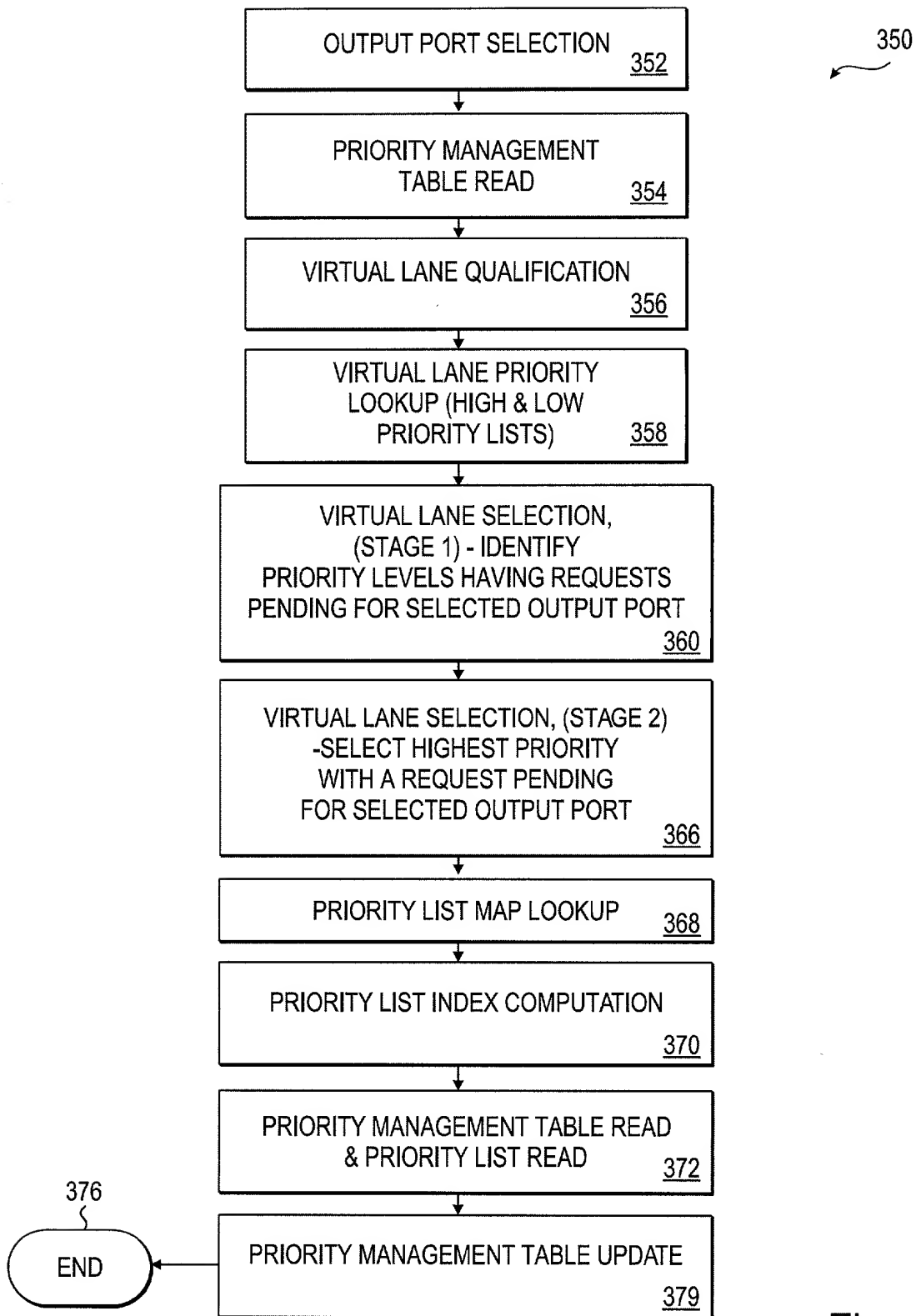


Fig. 15

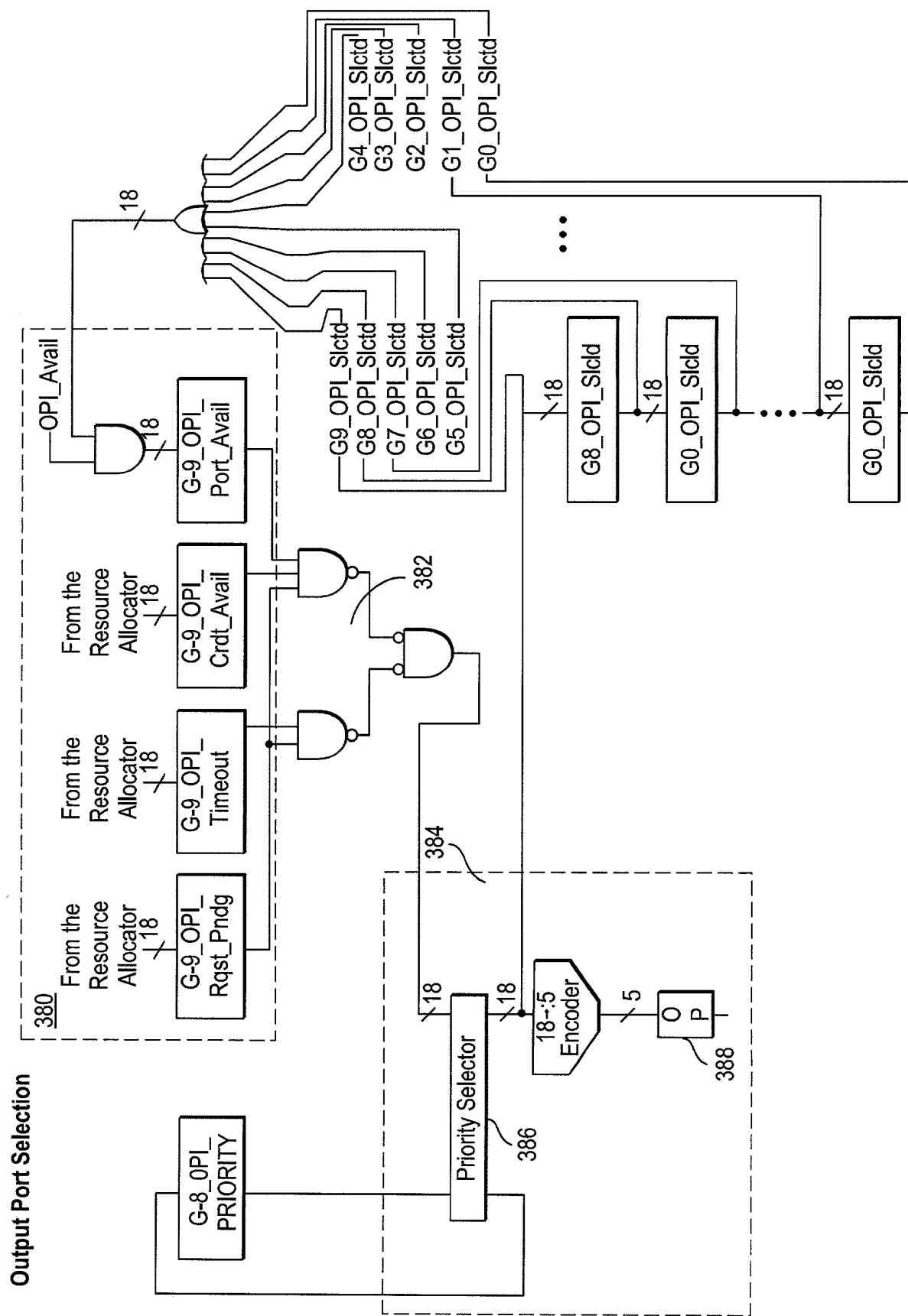


Fig. 16A

Priority Management Table Read

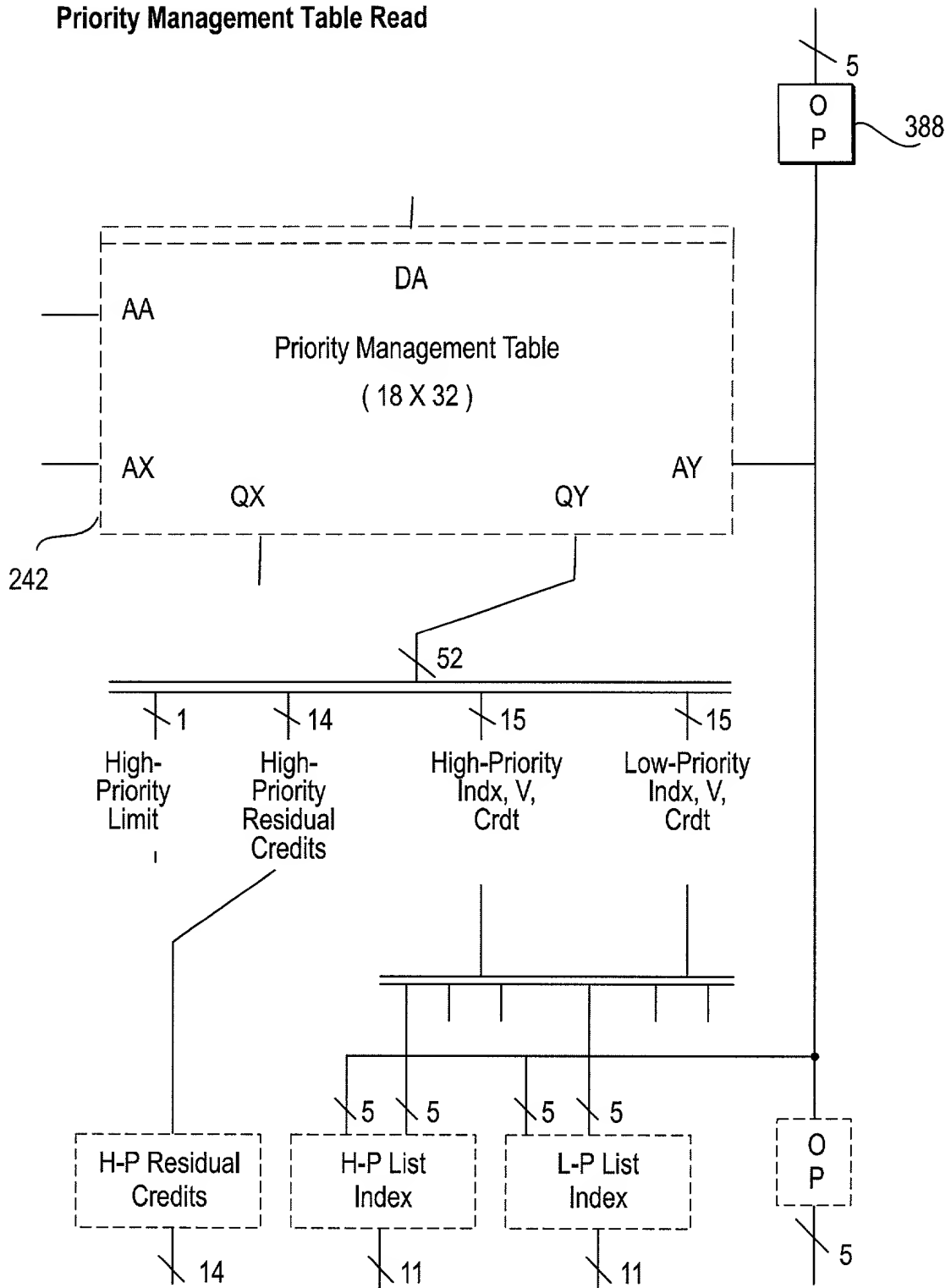


Fig. 16B

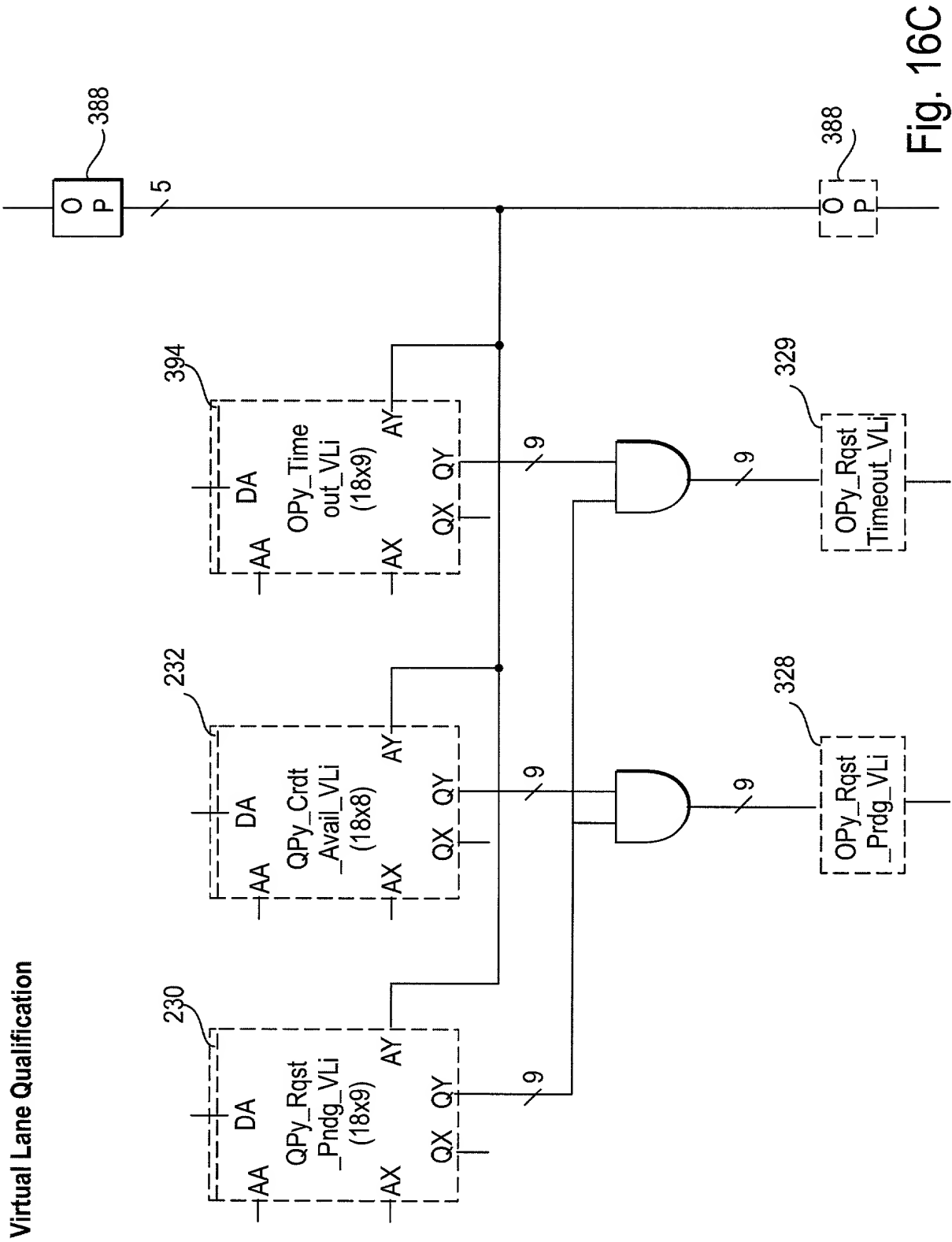


Fig. 16C

VL Priority Ranking Look-up

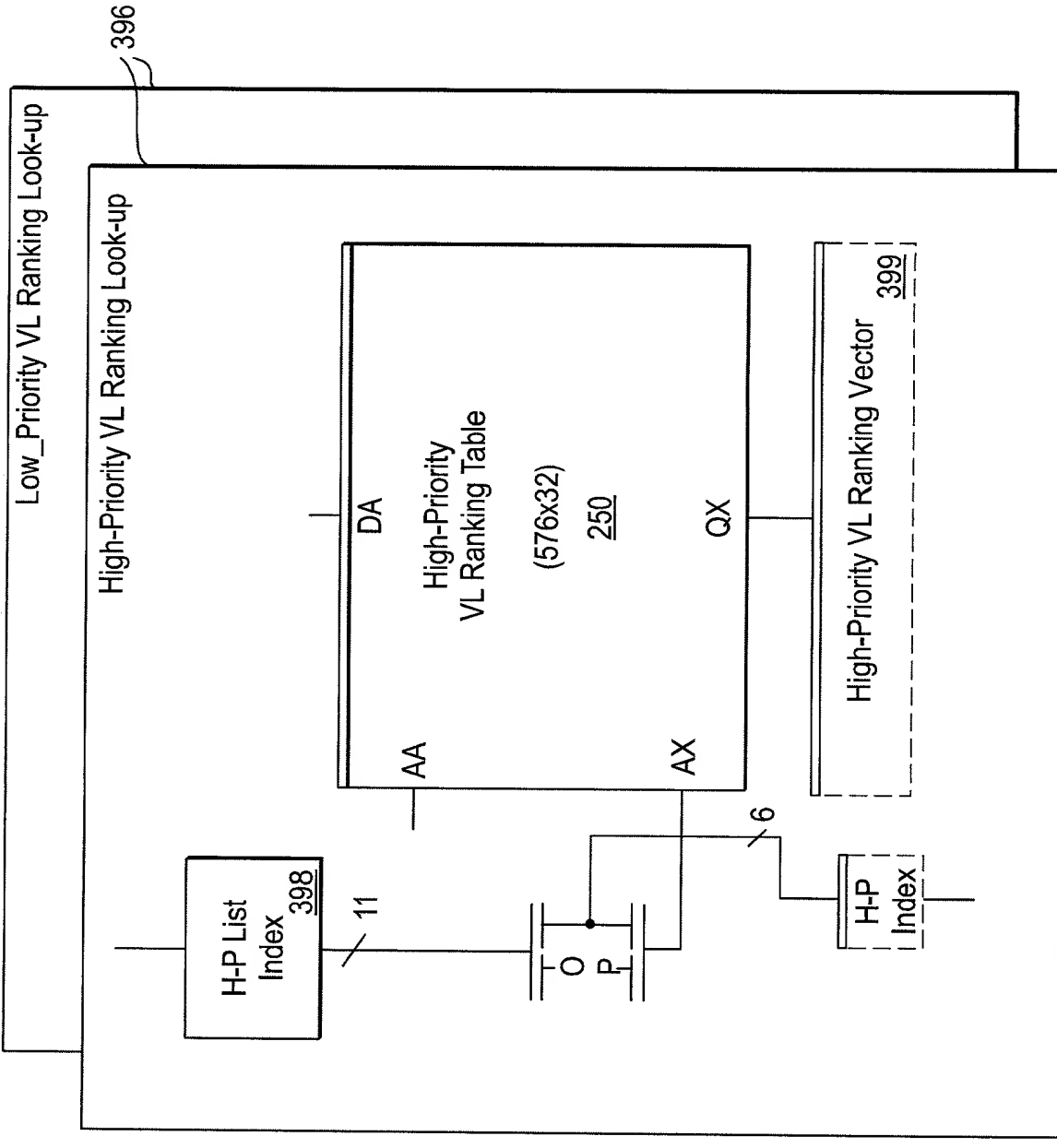
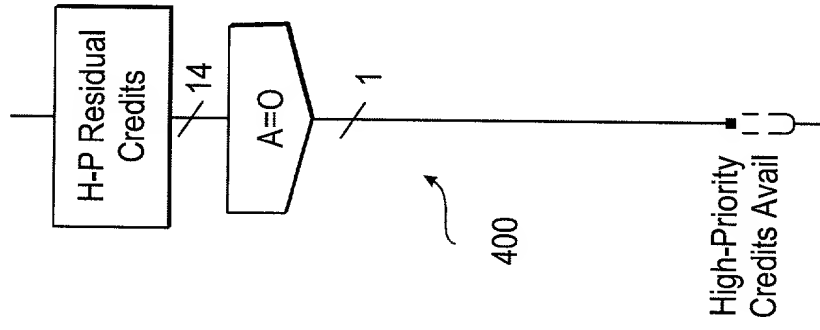


Fig. 16D

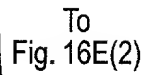
[illegible]

Fig. 16E(1)

Virtual Lane Selection 1

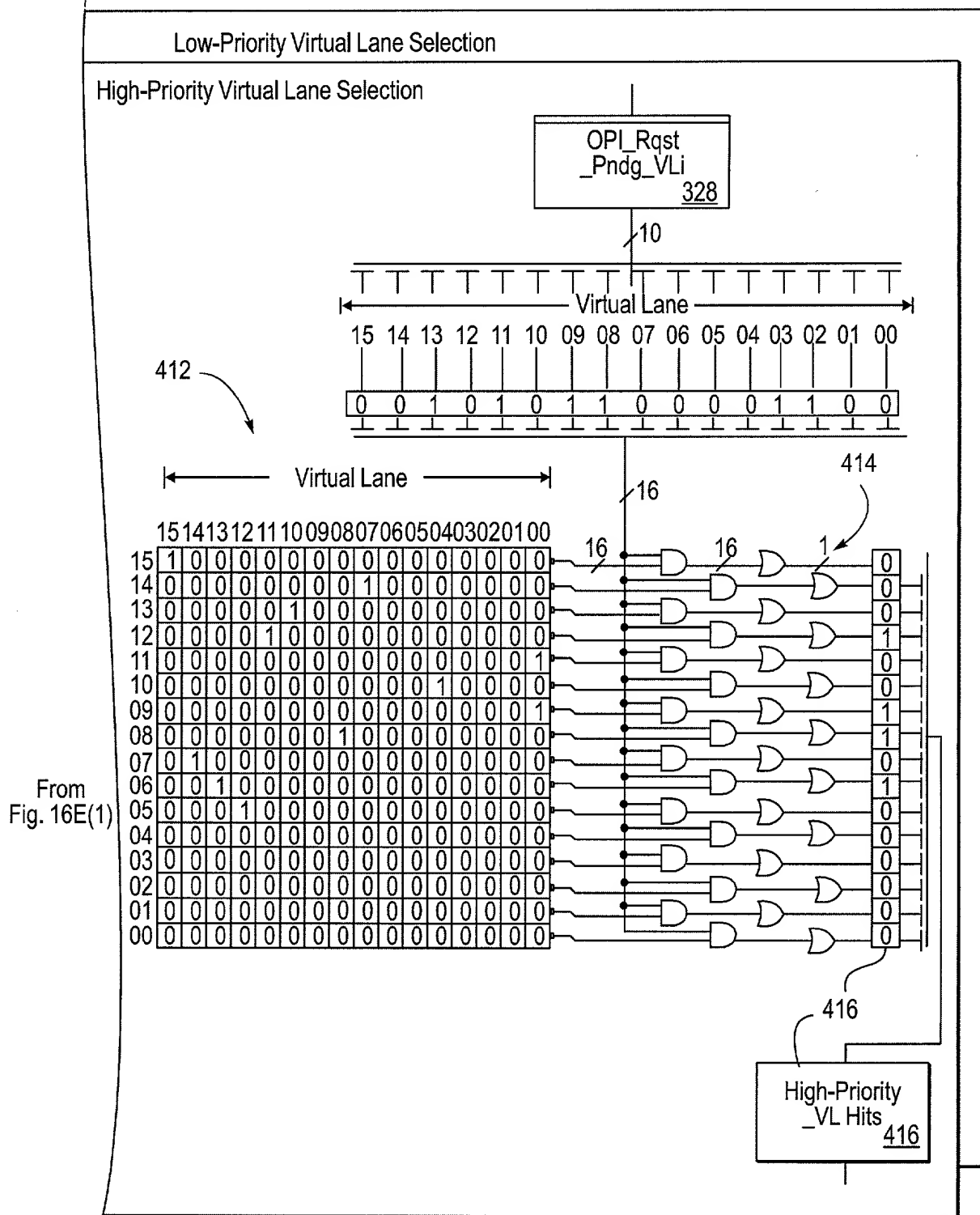


Fig. 16E(2)

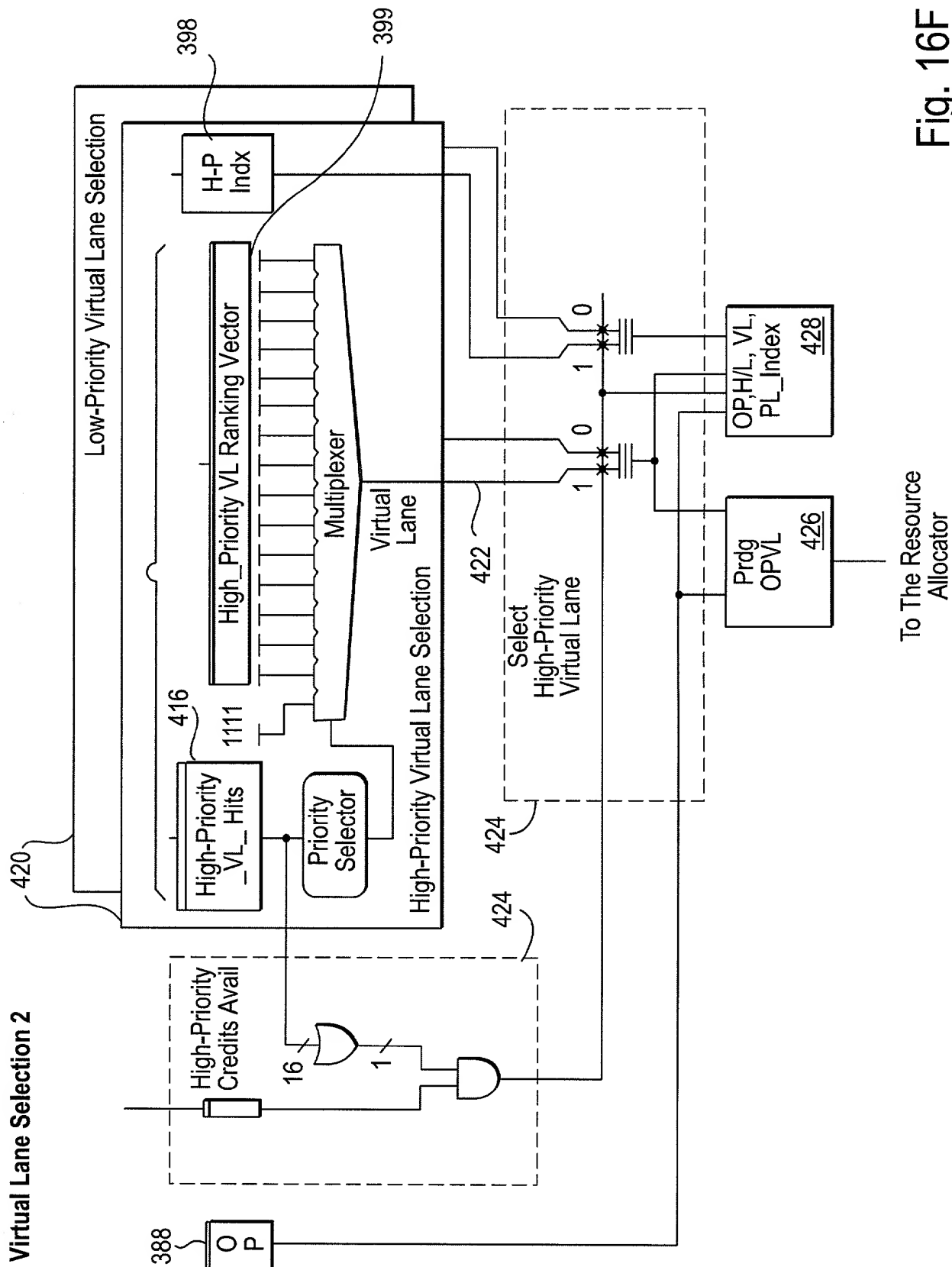


Fig. 16F

Priority Map Lookup

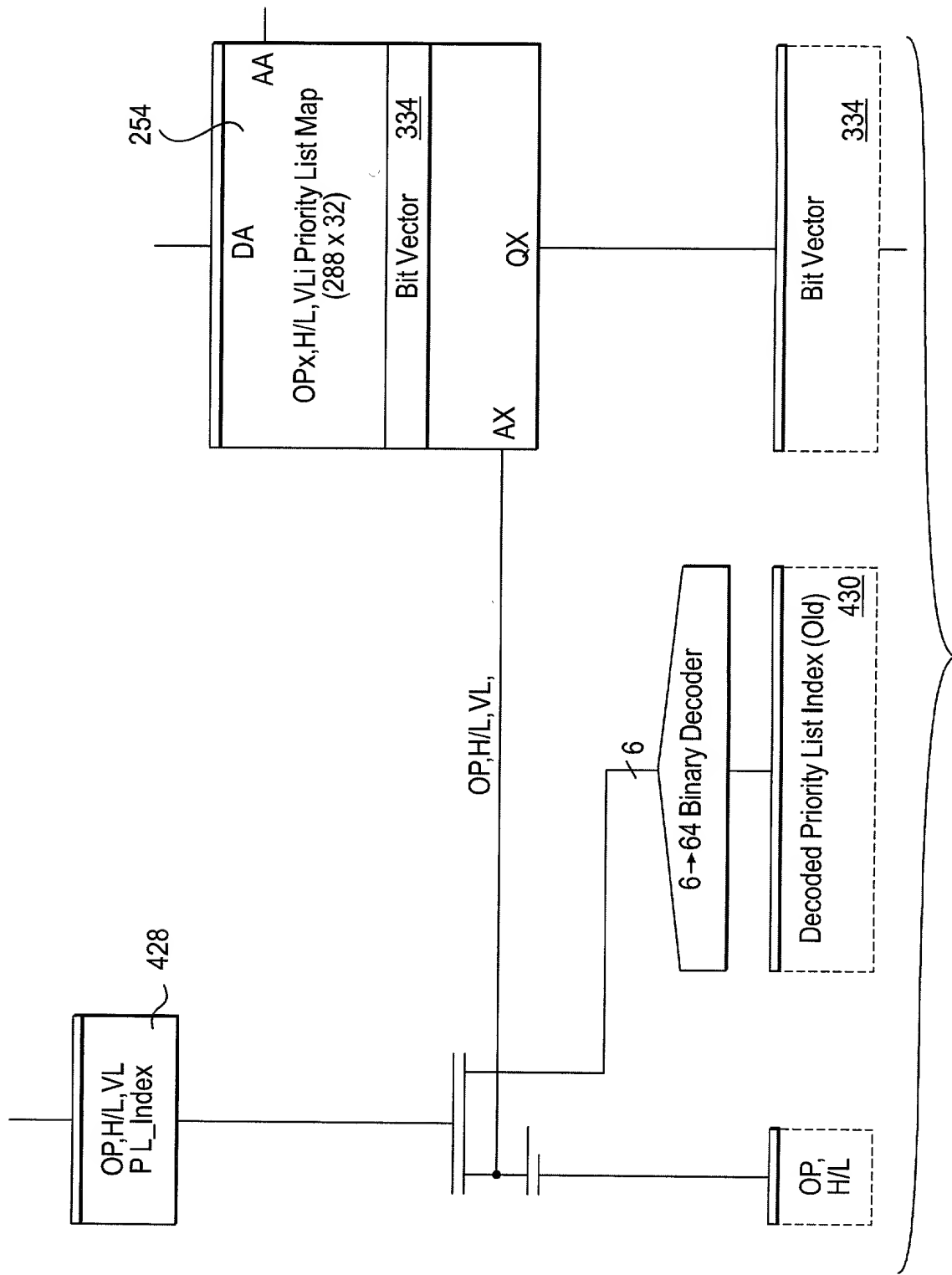


Fig. 16G

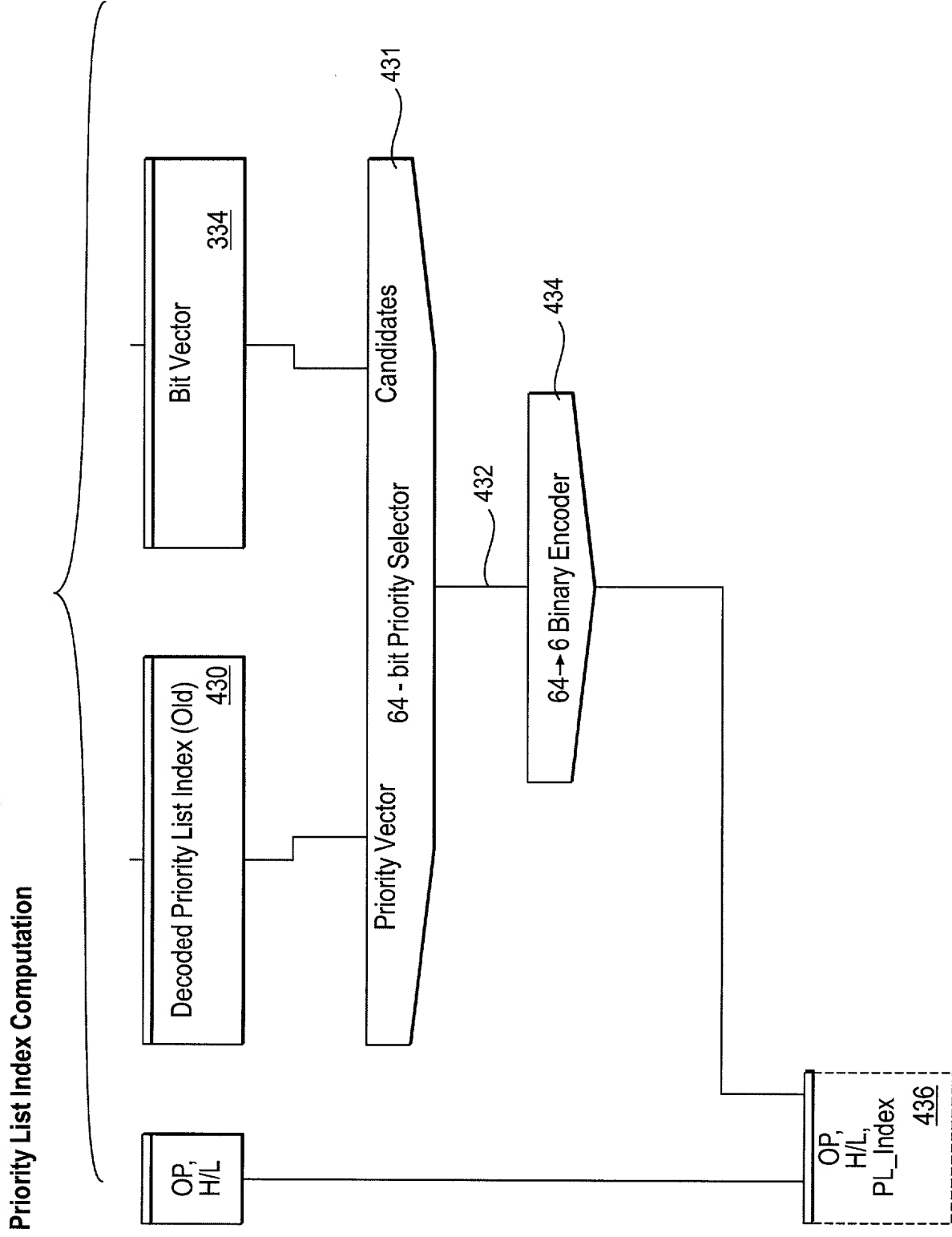


Fig. 16H

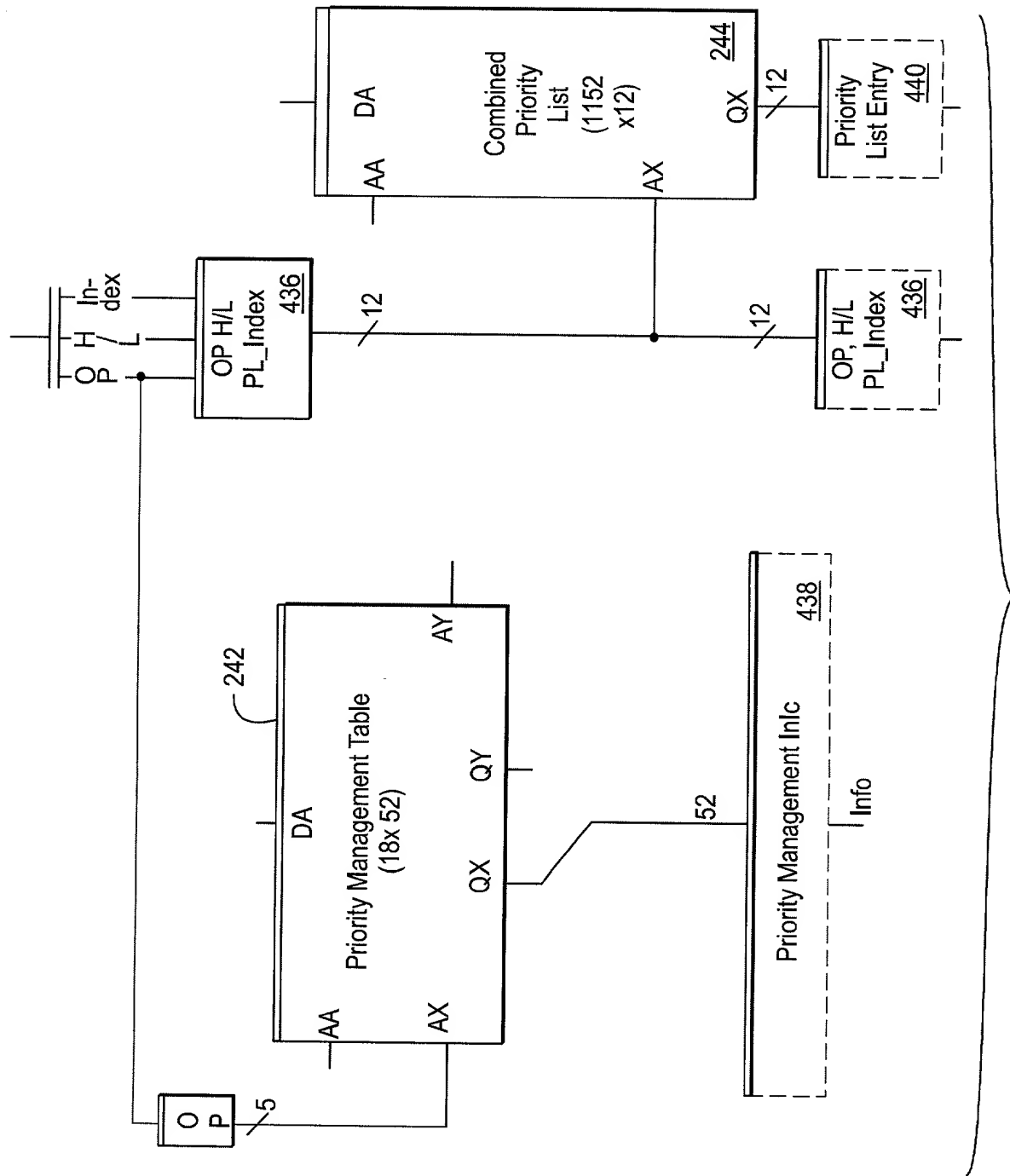


Fig. 16I

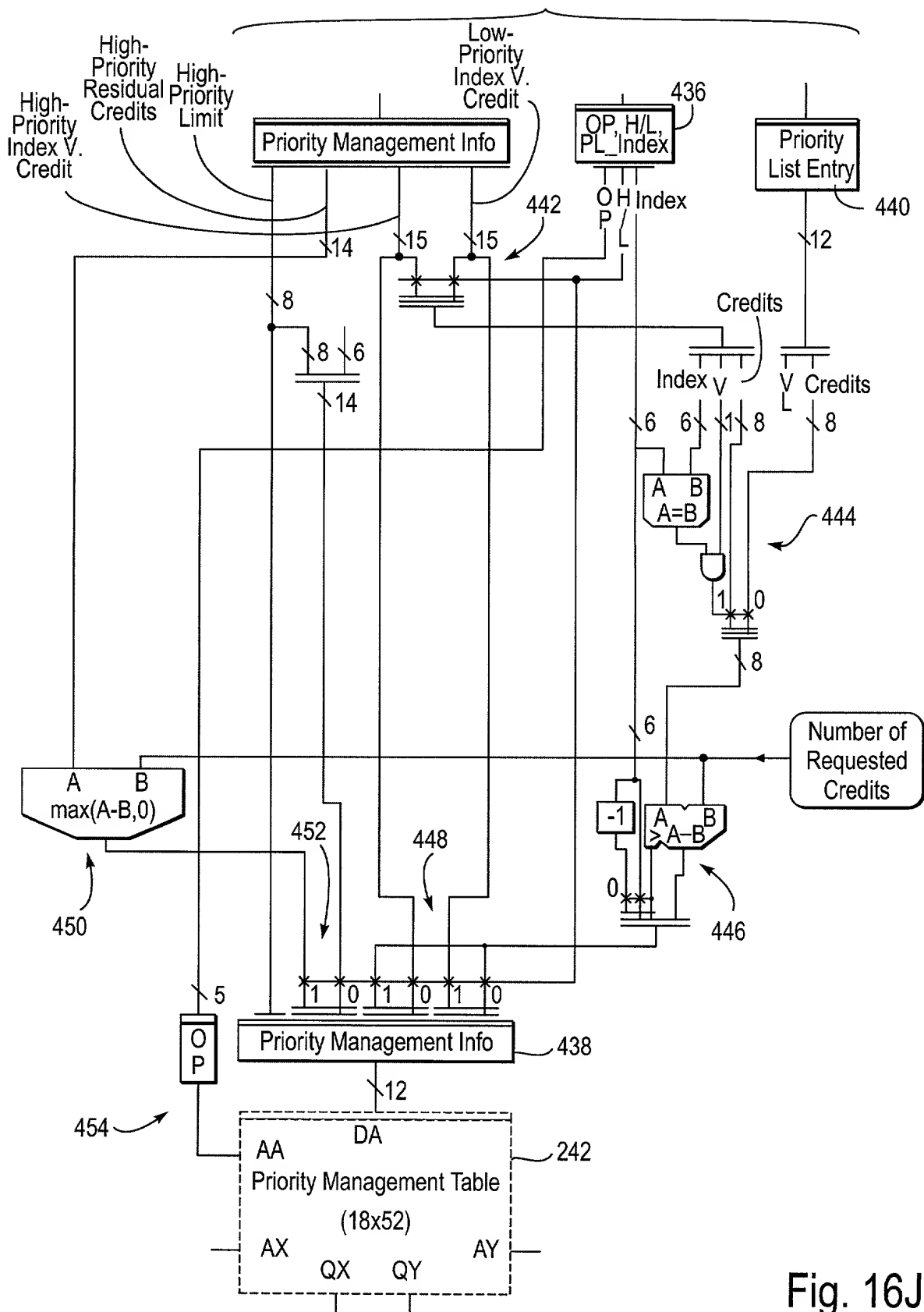


Fig. 16J

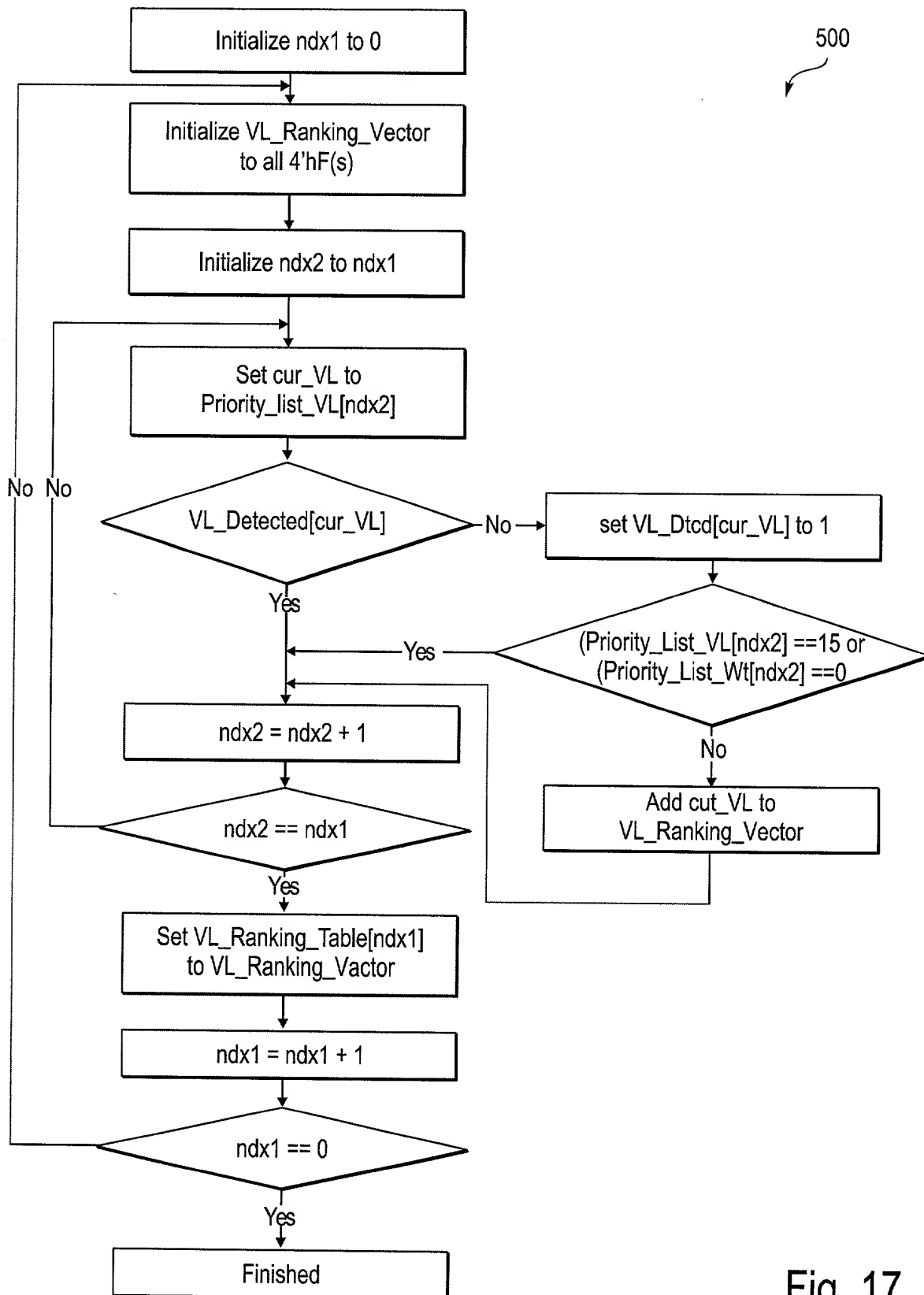


Fig. 17

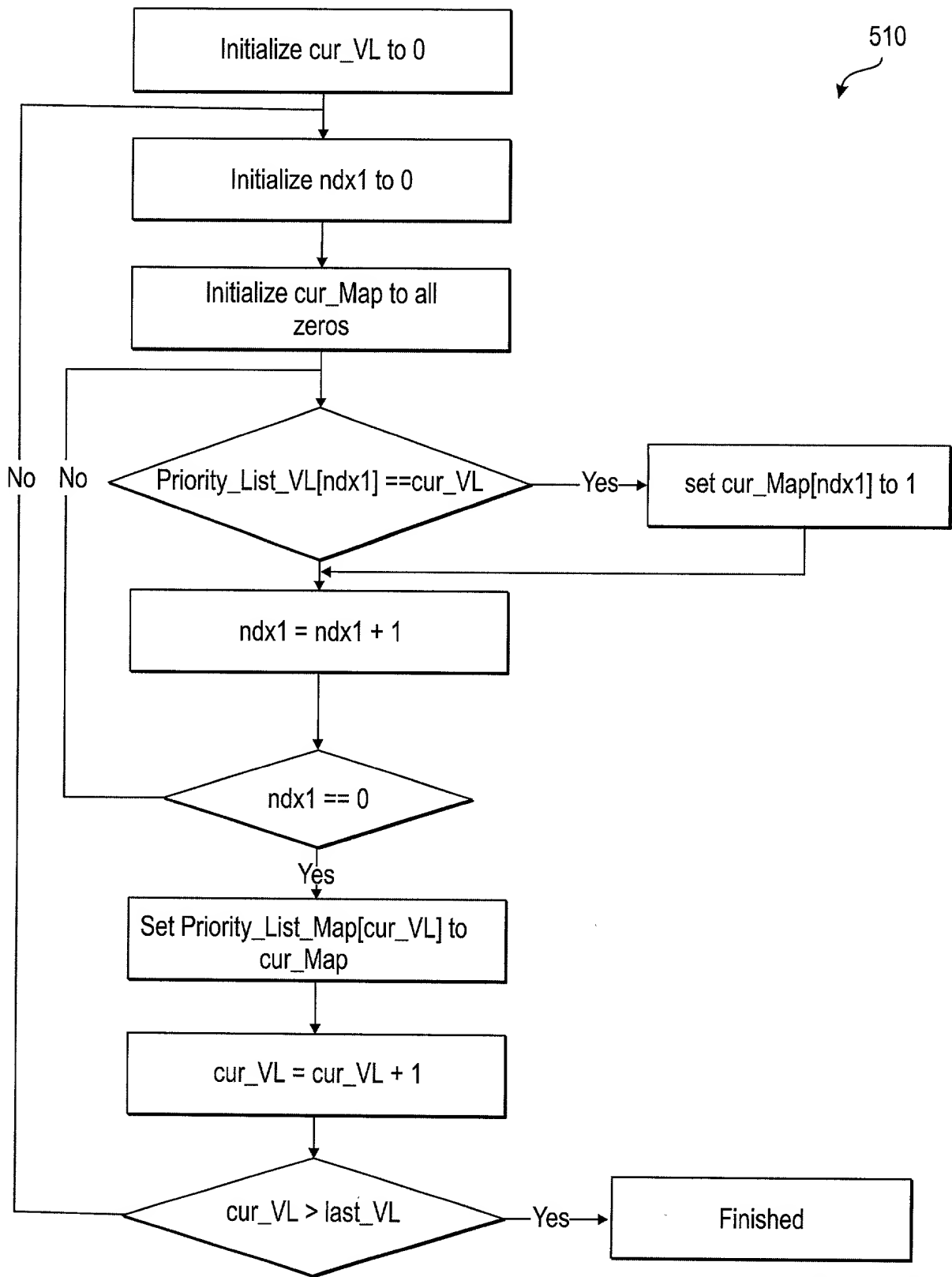


Fig. 18